I. A Response to the Final Office Action Dated June 29, 2004:

A. Status of the Claims

Claims 23-66 were pending upon the issuance of the Action dated June 29, 2004. No claims have been amended, canceled, or added. Claims 23-66 are therefore currently pending.

B. The Anticipation Rejection is Overcome

1. A Summary of the Rejection

The Action rejects claims 42-45 and 48-54 under 35 U.S.C. § 102(b) as being anticipated by JP 10-25471 ("JP '471"). The Action contends that JP '471 discloses a photochromic latex that includes a napthopyran compound formed by using an initiator and a monomer, wherein a biphasic layer is formed. The Action admits, however, that this reference does not disclose the size of the latex particles. *See* the Action, page 2. To supplement the deficient teachings, the Action contends that the JP '471 reference "would inherently have the same latex particle size as the present invention." *Id.* at page 1.

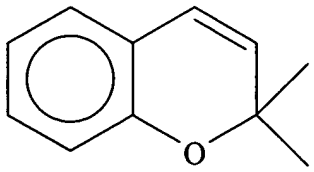
Applicants traverse. Claims 42-45 and 48-54 are not anticipated by JP '471 either expressly or inherently.

2. The Standard for Establishing Anticipation

Anticipation requires that each and every element of the claimed invention be described, either expressly or inherently, in a single prior art reference. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1327, 58 U.S.P.Q.2d 1545, 1552 (Fed. Cir. 2001); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). It is well settled that the burden of establishing a *prima facie* case of anticipation resides with the Examiner and only if that burden is met, does the burden of going forward shift to the applicant. *See In re Sun*, 31 U.S.P.Q.2d 1451,1453 (Fed. Cir. 1993).

3. One Embodiment of Applicants' Claimed Invention

In one embodiment, Applicants presently claim "[a] latex with photochromic properties, further defined as comprising particles of a polymer material resulting from the free-radical polymerization of at least one monomer Z with a C=C group comprising one or more organic photochromic compound comprising a nucleus of formula:



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the particles of said polymer material having ***an average size of between 50 and 400 nm***." Claim 42 (emphasis added). Applicants also claim a corresponding "substrate comprising a dry latex film." Claim 49.

As discussed in detail in the following section, the Action has not met its initial burden of establishing anticipation by inherency. Moreover, the Action has failed to establish that the latex particle sizes in JP '471 have "an average size of between 50 and 400 nm."

4. A *Prima Facie* Case of Anticipation by Inherency Has Not Been Established

The Action admits that the JP '471 reference fails to teach particles "having an average size of between 50 and 400 nm." The Action, page 3. The Action's assertion that the particles of JP '471 would inherently have the same particle size of the present invention is incorrect and without basis. The Action has not cited to appropriate evidence to support such a contention. *See In re Sun*, 31 U.S.P.Q.2d 1451. The Action's only evidence that JP '471 inherently discloses Applicants' claimed invention is its own statement that:

> JP '471 teaches a photochromic latex which comprises naphthopyran compounds which is formed by using an initiator, such as persulfate, and monomers, such as

> methacrylates...Such would inherently have the same latex particle size as in the present invention.

The Action, page 1. The Action fails to substantiate its own statement: it cites to no particular passages in the JP '471 reference, no additional references, and no extrinsic or intrinsic evidence of any kind. The statement is therefore not evidence: rather, it is the Examiner's own unsubstantiated opinion about the size of the latex particles in the JP '471 reference. The Federal Circuit has repeatedly held, however, that unsubstantiated opinions are insufficient to establish anticipation by inherency: "the extrinsic evidence must make clear that the missing descriptive matter is **necessarily present** in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Telemac Cellular Corp. v. Topp Telecom, Inc.* 247 F.3d 1316, 1328 (Fed. Cir. 2001) (emphasis added); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999); *Continental Can Co. v. Monsanto Co.*, 948 F.3d 1264, 1268 (Fed. Cir. 1994). Further, "[t]he mere fact that a certain thing may result from a given set of circumstances is **not sufficient**." *In re Robertson*, 169 F.3d at 745 (emphasis added). Substantiated evidence by the Examiner is needed to support the present anticipation rejection. *See In re Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Interferences 1990) (stating that "the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic **necessarily flows** from the teachings of the applied prior art.") (emphasis added). This type of evidence has not been presented, and therefore, the present anticipation rejection is improper and cannot be maintained. If the Action is relying on personal knowledge or any other reference to support the proposition that particles within Applicants' claimed range are "necessarily present" in JP '471, Applicants must request that the Examiner prepare an affidavit and enter it into the file history of this application pursuant to 37 C.F.R. § 1.104(d)(2); *see also* MPEP § 2144.03(C).

In contrast to the lack of evidence presented by the Action, Applicants' have provided substantial evidence that shows that "particles ... having an average size of between 50 and 400 nm" do **not** "necessarily flow[s]" from the teachings in the cited JP '471 reference. In Applicants' previous response, for example, it was noted that U.S. Patent No. 4,489,108 ("the '108 patent"), which is listed in the Action's own PTO-892 form (paper no. 7), discloses latexes that have particles sizes **outside** of the range of Applicants' claimed range. *See* the '108 patent, col. 5, lines 24-29 and lines 43-49 (disclosing particle sizes having an average size of 480 nm and 920 nm, respectively). It cannot be maintained by the Action, therefore, that a person of ordinary skill in the art would expect that the particle sizes in JP '471 would necessarily have "the same latex particle as in the present invention."

Based on the lack of evidence presented by the Action, the deficient teachings of JP '471, and the substantial evidence presented by Applicants, the present anticipation rejection must fall. The rejection of claims 42-45 and 48-54 as being anticipated by the JP '471 reference should therefore be withdrawn.

C. The Obviousness Rejection is Overcome

1. A Summary of the Rejection

The Action also rejects claims 42-45 and 48-54 under 35 U.S.C. § 103(a) as being unpatentable over JP '471 in view of U.S. Patent 4,578,305 to Postle *et al.* and a declaration (the Maisonnier Declaration) submitted in a non-related application (U.S. Application No. 09/991,773 (the '773 Application)). The Action admits that the primary reference, JP '471, "differs from the present invention in that the size of the latex particles are not specifically disclosed." The Action, page 2.

To supplement the deficient teachings of JP '471, the Action improperly cites to the Maisonnier declaration—which is not prior art to the present claims—and states that "the

teachings therein state that the typical latex formed by different methods of emulsion, still have a particle size of 150-250 nm." *Id.* at page 2. The Action also contends that Postle *et al.* discloses "that variation of the particle size of the latex in a photochromic latex will have significant impact on films formed thereby." From this, the Action concludes that Applicants' claimed invention is obvious.

Applicants traverse this rejection. Claims 42-54 are not obvious over the cited references.

2. The Maisonnier Declaration Is Not Prior Art

As an initial matter, the Maisonnier Declaration is not prior art. The Declaration does not fall under any subsection of 35 U.S.C. § 102. Applicants have not adopted—nor even referred to—the Maisonnier Declaration. The present application is not related to the 09/991,773 application nor does it contain the same inventive entity. No admissions have been made by the Applicants in the present case that the Declaration is even applicable to the rejections presented in this case.

Further, the Action's citation and reliance on *In re Wilson* is without basis. The *In re Wilson* case, at most, stands for the proposition that "...later publications showing factual evidence can be cited ... where the facts shown in the reference are evidence 'that, as of an application's filing date ... characteristics of prior art products were known ... .'" MPEP § 2124 (emphasis not added); *see also, In re Wilson* 135 U.S.P.Q. 442. The *In re Wilson* case is therefore distinguishable from the present situation. The information in the Maisonnier Declaration, for example, was **not known** prior to the present application's filing date. The present application was first filed on February 26, 1999—over a year and a half earlier than the date that the '773 application was first filed (*i.e.*, November 17, 2000) and over three years earlier than the date that the Maisonnier Declaration was actually executed (*i.e.* July 11, 2003).

Additionally, Applicants have not admitted—and the Action has presented no evidence to the contrary—that the subject matter in the Declaration was known to the Applicants prior to February 26, 1999. The Maisonnier Declaration is therefore not prior art, and it is improper to use the information contained in it to support the present obviousness rejection. *See, e.g., In re Openshaw*, 369 F.2d 760; 152 U.S.P.Q. 9 (C.C.P.A 1966) (noting that "[t]he trouble with both the board's and the appellants' view of the obviousness or nonobviousness of the subject invention is the reliance on the 1962 publication which is not prior art. Nor can it be regarded as describing the state of the art prior to the filing date of the application on appeal.").

For at least the reasons discussed above, the Maisonnier Declaration cannot be used to support the present obviousness rejection. The obviousness rejection therefore fails and should be withdrawn. Regardless, the following sections provide additional support that shows that the this rejection is improper.

3. The Standard for Establishing a *Prima Facie* Case of Obviousness

It is well settled that "[t]he examiner bears the initial burden of factually supporting any *prima facie* case of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of non-obviousness." MPEP § 2142.

To establish a *prima facie* case of obviousness, the Examiner must show: (1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) a reasonable expectation of success; and (3) the prior art reference teaches or suggests all of the claim limitations. MPEP § 2142; *see also In re Vaeck*, 947 F.2d 488. With respect to the motivation to combine the references, the MPEP states "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious

unless the prior art also suggests the desirability of the combination." MPEP § 2143.01. If any one of the three elements is missing, a *prima facie* case of obviousness cannot be established.

4. The Action Has Not Presented Any Evidence to Support the Obviousness Rejection

The Action has not presented the required evidence to support a *prima facie* case of obviousness. The Action admits that the primary reference relied upon to support the obviousness rejection, JP '471, "differs from the present invention in that the size of the latex particles are not specifically disclosed." The Action, page 2. The Action's attempt to combine the teaching of the JP '471 reference with the teachings of the Maisonnier Declaration and the Postle reference is improper. As discussed above and incorporated into this section by reference, the Action's reliance on the Maisonnier Declaration is improper. Based on this reason, alone, the present obviousness rejection fails and cannot be maintained.

Additionally, the Action failed to provide any evidence showing a motivation to combine the teachings of JP '471 with those of Postle *et al.* An unsubstantiated opinion that "it would be obvious to one of ordinary skill in the art to vary the size of the latex particles in order to optimize the photochromic properties of the latex" does not rise to the level of evidence required to support the obviousness rejection. *See* MPEP § 2143.01 ([t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." The Action's citation to *In re Allen*, 103 U.S.P.Q. 233 and *In re Rose*, 103 U.S.P.Q. 237 is not evidence of obviousness nor is it evidence of a motivation to combine the cited references. The citation to these cases is used merely as legal theory to support its unsubstantiated arguments. Based on the lack of evidence alone, the present obviousness rejection fails. *See* MPEP § 2142 ("The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not

produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness") (emphasis added).

Because the required evidence necessary to support a *prima facie* case of obviousness has not been presented by the Action, the present obviousness rejection cannot be maintained and should be withdrawn.

5. The Cited References Fail To Teach Every Element of the Present Invention

A necessary requirement in establishing a *prima facie* case of obviousness mandates a showing by the Action that every element is taught or suggested by the cited references. This has not been done. Applicants' arguments discussed in addressing the anticipation by inherence rejection above, are incorporated into this section by reference. Based on these arguments, it is apparent that the cited references fail to teach or suggest particles "having an average size of between 50 and 400 nm."

With respect to the Postle *et al.* reference, this reference appears to teach a photochromic assembly comprising photochromic glass beads in combination with a polymer latex. *See* Postle *et al.*, Abstract. A person of ordinary skill would not seek to use particles "having an average size of between 50 and 400 nm" in view of the teachings of Postle *et al.* Postle *et al.*, in fact, appears to teach away from Applicants' claimed invention by noting that "all the copolymer latexes prepared by the inventively used process have an average particle size **of less than** 0.05 μm [*i.e.*, less than 50 nm]." Postle *et al.*, col. 5, lines 49-51 (emphasis added); *see also Tec Air, Inc. v. Denso*, 192 F.3d 1353, 1360 (Fed. Cir. 1999) ("A reference may be said to teach away when a person of ordinary skill in the art would be ... led in a direction divergent from the path that was taken by the applicant ... ."). The data presented in Postle *et al.* supports this conclusion. Specifically, the data show that latexes having a particle size greater than 50 nm **fail** to work for their intended purpose. In this regard, Postle *et al.* states:

> However in the case of the sheet which comprises copolymer (5) [which includes particles having an average size of 92 nm] the milkiness of the coating **precludes** a noticeable darkening of the non-covered part of the sheet when exposed to the u.v.-lamp.

Id. at col. 6, lines 24-28 (emphasis added). This is strong evidence that this reference would lead a person of ordinary skill in the art in a divergent path from Applicants' invention.

Because the cited references fail to teach every element of the present invention, the present obviousness rejection cannot be maintained.

6. There Is No Motivation To Combine the Cited References

An additional requirement for the Action to establish a *prima facie* case of obviousness mandates a showing that there is a motivation to combine the teachings of JP '471 with the teachings of Postle *et al.* This has not been done.

As noted above, the JP '471 reference is directed towards a photochromic latex that includes a napthopyran compound. By contrast, the Postle *et al.* reference is directed towards a photochromic assembly comprising photochromic glass beads in combination with a polymer latex. *See* Postle *et al.*, Abstract. There is no suggestion or motivation in either of the cited references that the teachings could be combined. This is especially true where, as in the present case, the references are directed towards different compositions. For example, there does not appear to be any suggestion in Postle *et al.* that it teachings—which include the use of photochromic glass beads—could be used in combination with the disclosed JP '471 compositions that do not use glass beads. Similarly, there does not appear to be any suggestion that the compositions of JP '471 could be used in combination with the photochromic glass beads in Postle *et al.* Moreover, and as noted above, the Action has failed to present any evidence showing a motivation to combine these references.

Because there is no motivation to combine the cited references, the present obviousness rejection cannot be maintained.

7. There Is No Reasonable Expectation of Success That Such A Combination Would Work

A final element necessary to establish a *prima facie* case of obviousness requires a showing by the Action that there is a reasonable expectation of success that the combinations of the cited references would work. Similar to the other requirements, this has not been done.

Again, Postle *et al.* is directed towards compositions that comprise photochromic glass beads. By contrast, JP '471 is directed towards a photochromic latex that includes a napthopyran compound. There is no reasonable expectation of success that varying the size of the latex particles, as shown in Postle *et al.*, would work with the teachings of JP '471. This is especially true in view of the data presented in Postle *et al.* which shows that a change in the size of the latex particles above 50 nm can render the photochromic assembly unusable. *See* Postle *et al.*, col. 6, lines 24-28 (emphasis added).

Because all three of the necessary elements required to establish a *prima facie* case of obviousness have not been established by the Action, the present obviousness rejection cannot be maintained. For at least the reasons stated above, the obviousness rejection for claims 42-45 and 48-54 is overcome and should be withdrawn.

D. The Double Patenting Rejection Is Overcome

The Action provisionally rejects claims 24-27, 36-39, 55-57, and 62 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of co-pending Application No. 09/991,773. The Action incorrectly contends that these claims are not patentably distinct from each other because the method of the claims use the same components as in the present invention.

Applicants traverse. Claims 24-27, 36-39, 55-57, and 62 are patentably distinct from the claims in the '773 Application.

The present claims are directed towards a "[a] method for preparing a latex with photochromic properties comprising: **preparing an aqueous emulsion** ... ." Claim 24 (emphasis added). By contrast, the claims of the '773 Application, for example, are directed towards "[a] method of obtaining photochromic latex comprising: preparing a mixture comprising at least one organic monomer Z ... **forming a miniemulsion of the mixture** ... adding a polymerization primer to the mixture before, during, or after forming the miniemulsion; polymerizing of the reaction mixture, and recovering photochromic latex." Claim 13 of the '773 Application (emphasis added); *see also* claim 30.

Other than the Action's unsubstantiated opinion that "a miniemulsion is a type of emulsion, and renders the broad teaching of the emulsion of the current claims obvious to one of ordinary skill in the art," the Action fails to present any substantiated evidence to support the present rejection. The only apparent reasoning given by the Action appears to be based on its conclusion that "the method of the claims of 09/991,773 uses the same components as in the present invention... ." *See* the Action, page 4. This is not the case; the present claims **do not** include an element of "forming a miniemulsion of the mixture."

In contrast to the Action's unsubstantiated opinion in this case, Applicants note that the Maisonnier Declaration that was filed in the '773 application was filed in response to an obviousness rejection that was based on the teaching of US 2002/0128339 to Maisonnier *et al.*, which corresponds to the present application. The Declaration shows that the preparation of emulsions **is different** from the preparation of miniemulsions. The obviousness rejection in the '773 application was subsequently withdrawn and the claims were allowed. In doing so, the

examiner reasoned that "there is no teaching of preparing a miniemulsion of the monomer mixture prior to polymerization" in the present application. *See* Appendix A, the Notice of Allowance in the '773 Application. This is strong evidence that shows that the present obviousness-type double patenting rejection appears to be ungrounded and should be withdrawn.

Applicants provide additional evidence that further shows that a person of ordinary skill in the art would not consider the present claims an obvious variation of the claims of the '773 Application. Conventional emulsions, for example, have larger initial particle sizes. For example, the sizes may be in the range of 1 to 10 μm (*i.e.*, 1,000 to 10,000 nm). By contrast, miniemulsions generally have smaller initial particle sizes that may range, for example, from 50 to 500 nm. When producing a latex from an emulsion, the initial particle sizes dissolve and then reorganize into the latex. By contrast, the initial particles in a miniemulsion process typically do not dissolve prior to reorganizing into the latex. These differences provide additional evidence that the present claims are **not** an obvious variation of the claims of the '773 application and *vice versa*.

Based on the present claims, Applicants' proffered evidence, and the Action's lack of evidence to support the double-patenting rejection, the present rejection cannot be maintained. The provisional double patenting rejection of claims 28-35, 37, 38, 40, 41, 58-61, and 63-66 in view of the '773 Application should therefore be withdrawn.

E. Conclusion

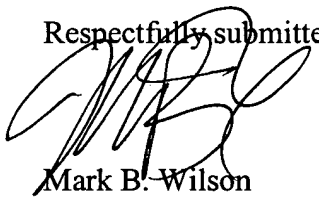
Applicants believe that the present document is a full and complete response to the Office Action dated June 29, 2004. Applicants submit that the present case is in condition for allowance and such favorable action is requested.

II. A Petition for a Two-Month Extension of Time:

Pursuant to 37 C.F.R. § 1.136(a), Applicants petition for an extension of time of two months to and including November 19, 2004, in which to respond to the Office Action dated June 29, 2004 . Pursuant to 37 C.F.R. § 1.17, a check in the amount of $430.00 is enclosed, which is the process fee for a two-month extension of time for a small entity status. If the check is inadvertently omitted, or should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to the enclosed materials, or should an overpayment be included herein, the Commissioner is authorized to deduct or credit said fees from or to Fulbright & Jaworski Deposit Account No. 50-1212/ESSR:052US.

The Examiner is invited to contact the undersigned Attorney at (512) 536-3035 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,



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